

**SOUTHWEST FISHERIES SCIENCE CENTER**  
**SECOND QUARTER REPORT-FY 2001**  
For the Period January 1 - March 31, 2001

**Submitted By:** John Hunter, Director, Fisheries Resources Division.

**Title of Accomplishment or Milestone:** Stock assessment for Pacific sardine.

**Current Status of Accomplishment or Milestone:** The stock assessment has been completed and has been reviewed by the PFMC CPS Management Team, the CPS Advisory Subpanel, and the Council's Scientific and Statistical Committee. The Council adopted a harvest guideline of 134,737 mt for the 2001 fishing season based on the results of the assessment.

**Background:** The assessment results are applicable to the Pacific sardine (*Sardinops sagax*) population off the North America Pacific coast from Baja California, Mexico to British Columbia, Canada. The majority of the fishery-independent and fishery-dependent data were collected off northern Mexico and southern California. However, as was done in past assessments, assumptions regarding sample coverage and sardine biology were used to make scientific inferences about the entire population, e.g., to provide fishery managers coastwide estimates of stock biomass, mortality rates, and harvest guidelines. Sardine landings in 2000 for the directed fisheries off California, U.S. and Ensenada, Mexico remained at the high levels that were reached in 1999, with a total harvest of roughly 114,000 mt. California landings in 2000 (59,925 mt) increased slightly (6%) from the 1999 landings, while Ensenada landings in 2000 (53,579 mt) decreased slightly (-9%). Currently, the U.S. fishery is regulated using a quota (harvest guideline) management scheme and the Mexico fishery (Ensenada landings) is essentially unregulated. As has been the case in recent years, landings from the U.S. Pacific sardine fishery (California, Oregon, and Washington) are well below the harvest guideline recommend for 2000.

**Purpose of Activity:** The PFMC's FMP for Pacific Coast Coastal Pelagic Species requires an annual stock assessment for Pacific sardine for the purposes of (i) assessing the biological condition of the stock and (ii) establishing harvest guidelines for the Pacific sardine fishery.

**Description of Accomplishment and Significant Results:** Estimated stock biomass ( $\geq 1$ -year old fish on July 1, 2000) from the assessment conducted this year indicated the sardine population has remained at a relatively high abundance level, with a bias-corrected estimate of nearly 1.2 million mt. The population has been increasing at a rate of approximately 30 percent per year since the mid 1980s. Estimated recruitment (age-0 fish on July 1, 2000), albeit more variable than stock biomass statistics, also remained at relatively high abundance, with the number of recruits increasing slightly from last year to nearly 14 billion. The latest sardine stock assessment document is available at [http://swfsc.nmfs.noaa.gov/fish\\_res.html](http://swfsc.nmfs.noaa.gov/fish_res.html)

**Significance of Accomplishment (e.g., to the Center, to Management, and to NMFS Strategic Plan Goals):** NMFS and the SWFSC, in particular, has the mandate to provide scientific support for the PFMC in implementing its Fishery Management Plan for Pacific Coast Coastal Pelagic Species. This research effort – accomplished in cooperation with the California Department of Fish & Game (CDFG) – represents an important part of that mandate, and fosters vital scientific collaboration with CDFG scientists.

**Problems:** None

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